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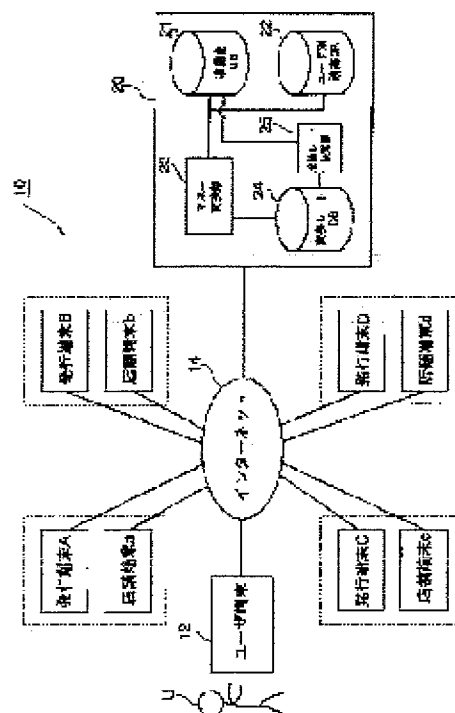(51)Int.Cl.   G06F 17/60

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(54) PREPAID TYPE DIGITAL CACHE CONVERSION SERVER, PREPAID TYPE DIGITAL CACHE CONVERSION SYSTEM AND PREPAID TYPE DIGITAL CACHE CONVERSION METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a prepaid type digital cache conversion system capable of integrating circulation routes.

SOLUTION: This prepaid type digital cache conversion system 10 comprises a user terminal 12 for using plural kinds of prepaid type digital caches by a user U and a prepaid type digital cache conversion server 20 connected to the user terminal 12 through the Internet 14. The server 20 has a conversion part 23 for converting one prepaid type digital cache of these prepaid type digital caches to the other prepaid type digital cache.

* NOTICES *

CLAIMS

[Claim(s)]
[Claim 1]It is the server connected by user who uses two or more kinds of prepaid type electronic money, and a network, A prepaid type electronic money conversion server provided with a conversion method which transforms said prepaid type electronic money of a kind of one into said prepaid type electronic money of other kinds among said two or more kinds of prepaid type electronic money.

[Claim 2]Have further a conversion rate storing means which stores a conversion rate at the time of transforming said prepaid type electronic money of a kind of 1 into said prepaid type electronic money of other kinds, and said conversion method, The prepaid type electronic money conversion server according to claim 1 characterized by transforming said prepaid type electronic money of a kind of 1 into said prepaid type electronic money of other kinds according to said conversion rate stored in said conversion rate storing means.

[Claim 3]Based on frequency in use of each of said prepaid type electronic money, it has further a conversion rate determination means to determine a conversion rate at the time of transforming said prepaid type electronic money of a kind of 1 into said prepaid type electronic money of other kinds, The prepaid type electronic money conversion server according to claim 2, wherein said conversion rate storing means stores said conversion rate determined by said conversion rate determination means.

[Claim 4]Have further a balance storing means according to user which stores the balance of each of said prepaid type electronic money which said user can use for every kind of each of said prepaid type electronic money, and said conversion method, Within the limits of the balance of said prepaid type electronic money of a kind of 1 stored in a balance storing means according to said user, The prepaid type electronic money conversion server according to any one of claims 1 to 3 transforming said kind of 1 of prepaid type electronic money into said prepaid type electronic money of other kinds.

[Claim 5]The balance of each of said prepaid type electronic money which said user can use is changed into said a specific kind of prepaid type electronic money by said conversion method, The prepaid type electronic money conversion server according to any one of claims 1 to 3 having further a balance storing means according to user which stores the balance of said prepaid type electronic money of a changed specific kind.

[Claim 6]Prepaid type electronic money conversion system comprising:
A user terminal for a user to use two or more kinds of prepaid type electronic money.

The prepaid type electronic money conversion server according to any one of claims 1 to 5 connected with said user terminal by a network.

[Claim 7]A user terminal for a user to use two or more kinds of prepaid type electronic money, Said prepaid type electronic money of a kind of at least 1 of said each prepaid type electronic money An usable store terminal, The prepaid type electronic money conversion server according to claim 4 or 5 connected with said user terminal and said store terminal by a network, When a preparation and said user access said store terminal and purchase goods or service with said user terminal, said prepaid type electronic money conversion server, In said store terminal, pay said an usable kind of prepaid type electronic money for said store terminal as said goods or a price for service, and. Prepaid type electronic money conversion system reducing the payment part amount equivalent from the balance of said prepaid type electronic money of said user stored in a balance storing means according to said user.

[Claim 8]Have further two or more issue terminals which publish said each prepaid type electronic money, and said prepaid type electronic money conversion server, The prepaid type electronic money conversion system according to claim 7 provided with an allowance storing means stored as an allowance which pays for said store terminal said each prepaid type electronic money acquired from said each issue terminal.

[Claim 9]The prepaid type electronic money conversion system according to claim 8, wherein said allowance storing means stores said prepaid type electronic money which said issue terminal published to said user.

[Claim 10]A converting method from which a prepaid type electronic money conversion server transforms prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds according to a user's demand, comprising:

An issue stage where two or more issue terminals publish said each prepaid type electronic money to said prepaid type electronic money conversion server.

A conversion stage where it requires that said user should transform said prepaid type electronic money of a kind of 1 into said prepaid type electronic money of other kinds, and said prepaid type electronic money conversion server transforms said prepaid type electronic money of a kind of 1 into said prepaid type electronic money of other kinds.

[Claim 11]The prepaid type electronic money converting method according to claim 10 changing in said conversion stage according to a conversion rate when transforming said prepaid type electronic money of a kind of 1 into said prepaid type electronic money of other kinds.

[Claim 12]The prepaid type electronic money converting method according to claim 11 having further a conversion rate determination stage of determining said conversion rate, based on frequency in use of each of said prepaid type electronic money.

[Claim 13]Said prepaid type electronic money conversion server is further provided with a balance storing stage classified by user of storing the balance of said prepaid type electronic money of each of said user for every kind of said prepaid type electronic money, Said conversion stage within the limits of the balance of said prepaid type electronic money of a kind of 1 stored in said balance storing stage classified by user, The prepaid type electronic money converting method according to claim 10 to 12 transforming said kind of 1 of prepaid type electronic money into said prepaid type electronic money of other kinds.

[Claim 14]An allowance storing stage where said prepaid type electronic money conversion server stores said each prepaid type electronic money published in said issue stage, When said user purchases goods or service in a store terminal on a network, Pay for said store terminal said prepaid type electronic money with which said prepaid type electronic money conversion server was stored in said allowance storing stage as said goods or a price for service, and. The prepaid type electronic money converting method according to claim 13 having further a settlement-of-accounts stage which reduces the payment part amount equivalent from said user's balance stored in said balance storing stage classified by user.

[Claim 15]In [in said issue stage, said issue terminal publishes said prepaid type electronic money to said user, and] said allowance storing stage, A prepaid type electronic money converting method given in any 1 paragraph of claim 14 characterized by what said prepaid type electronic money which said issue terminal published to said user is stored for.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention]This invention relates to the prepaid type electronic money used on the Internet etc.
[0002]
[Description of the Prior Art]From the former, micropayment-oriented prepaid type electronic money is known as a payment system on networks, such as the Internet. As for prepaid type electronic money, settlement of accounts is performed by the following systems. First, the user of prepaid type electronic money purchases the prepaid type electronic money of a constant sum in the form of ID from a prepaid entrepreneur. And if a user inputs ID when a user does some shopping on networks, such as the Internet, it is the structure whose balance of prepaid type electronic money decreases as a price for shopping.
[0003]
[Problem(s) to be Solved by the Invention]However, the above-mentioned prepaid type electronic money had the following problems in respect of the distribution channel. That is, prepaid type electronic money has been used only at the store where the prepaid entrepreneur who publishes prepaid type electronic money has tied up. To do some shopping at stores other than the store where the prepaid entrepreneur of 1 which is an issuer of the prepaid type electronic money which a user owns ties up by this. The user had to receive issue of prepaid type electronic money from another prepaid entrepreneur who has tied up with the store to buy, and was inconvenient.
[0004]Then, this invention solves an aforementioned problem and it aims at providing the prepaid type electronic money conversion server and prepaid type electronic money conversion system which can aim at integration of a distribution channel, and a prepaid type electronic money converting method.
[0005]
[Means for Solving the Problem]A prepaid type electronic money conversion server concerning this invention, It is the server connected by user who uses two or more kinds of prepaid type electronic money, and a network, and has a conversion method which transforms prepaid type electronic money of a kind of one into prepaid type electronic money of other kinds among two or more kinds of prepaid type electronic money.
[0006]Thus, a user who uses two or more kinds of prepaid type electronic money, By connecting a prepaid type electronic money conversion server which has a conversion method which changes a kind of each

prepaid type electronic money mutually by a network, prepaid type electronic money which a user owns is convertible for prepaid type electronic money of a desired kind. When this accesses a store terminal with a user, goods or service is purchased and prepaid type electronic money of a predetermined kind which this user does not own is needed, it becomes unnecessary to receive issue of prepaid type electronic money of a predetermined kind anew. That is, prepaid type electronic money which this user has already owned can be transformed into prepaid type electronic money of a predetermined kind using a prepaid type electronic money conversion server connected by a network, and desired goods or service can be purchased in this store terminal.

[0007]Have further a conversion rate storing means which stores a conversion rate at the time of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, and a conversion method, It is good also considering transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds according to a conversion rate stored in a conversion rate storing means as a feature.

[0008]Thus, even if it is a case where worth (purchasing power) of each prepaid type electronic money differs mutually by changing a kind of each prepaid type electronic money based on a conversion rate stored in a conversion rate storing means, it becomes possible to change the kind.

[0009]The above-mentioned prepaid type electronic money conversion server, Based on frequency in use of each prepaid type electronic money, it has further a conversion rate determination means to determine a conversion rate at the time of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, A conversion rate storing means is good also considering storing a conversion rate determined by a conversion rate determination means as a feature.

[0010]Thus, when a conversion rate determination means defines a conversion rate based on frequency in use of each prepaid type electronic money, a proper conversion rate can be set up corresponding to demand of each prepaid type electronic money.

[0011]The above-mentioned prepaid type electronic money conversion server, Have further a balance storing means according to user which stores the balance of each prepaid type electronic money which a user can use for every kind of each prepaid type electronic money, and a conversion method, Within the limits of the balance of prepaid type electronic money of a kind of 1 stored in a balance storing means according to user, it is good also considering transforming prepaid type electronic money of a kind of one into prepaid type electronic money of other kinds as a feature.

[0012]Thus, by having a balance storing means according to user, the prepaid type electronic money conversion server can manage the balance of each prepaid type electronic money which a user can use. When a prepaid type electronic money conversion server changes a ratio of the balance of each prepaid type electronic money stored in a balance storing means according to user, the user can use prepaid type electronic money of a kind of 1 for prepaid type electronic money of other kinds, changing it.

[0013]The above-mentioned prepaid type electronic money conversion server, It is good also considering having further a balance storing means according to user which changes into a specific kind of prepaid type electronic money the balance of each prepaid type electronic money which a user can use by a conversion method, and stores the balance of a specific kind of changed prepaid type electronic money as a feature.

[0014]Thus, by transforming into a specific kind of prepaid type electronic money each prepaid type

electronic money which a user can use, and storing in a balance storing means according to user, a total amount of the balance of prepaid type electronic money can be easily grasped on the basis of this prepaid type electronic money. Specific prepaid type electronic money of a kind may be electronic money for balance management which a prepaid type electronic money conversion server establishes.

[0015]This invention is characterized by prepaid type electronic money conversion system comprising the following, in order that a user may use two or more kinds of prepaid type electronic money.
User terminal.
The above-mentioned prepaid type electronic money conversion server connected with a user terminal by a network.

[0016]Thus, when a user terminal for a user to use two or more kinds of prepaid type electronic money and the above-mentioned prepaid type electronic money conversion server constitute a system connected by a network, The user can use prepaid type electronic money of a kind of 1 for prepaid type electronic money of other kinds, changing it.

[0017]Prepaid type electronic money conversion system, A user terminal for a user to use two or more kinds of prepaid type electronic money, Prepaid type electronic money of a kind of at least 1 of each prepaid type electronic money An usable store terminal, It has the above-mentioned prepaid type electronic money conversion server connected with a user terminal and a store terminal by a network, When a user accesses a store terminal and purchases goods or service with a user terminal, a prepaid type electronic money conversion server, In a store terminal, an usable kind of prepaid type electronic money is paid for a store terminal as goods or a price for service, and it is good also considering reducing the payment part amount equivalent from the balance of a user's prepaid type electronic money stored in a balance storing means according to user as a feature.

[0018]A user terminal for a user to use prepaid type electronic money, as for a system concerning this invention, A store terminal which does some shopping by a user accessing, and the above-mentioned prepaid type electronic money conversion server constitute a system connected by a network, When a user accesses a store terminal and does some shopping (i.e., when using prepaid type electronic money), A prepaid type electronic money conversion server pays a price for a store terminal, and it is supposed that prepaid type electronic money equivalent to the price will be reduced from the balance stored in this user's balance storing means according to user. When a user does not have a required kind of prepaid type electronic money in a balance storing means according to user in each store terminal or it runs short by this, It becomes unnecessary to change a kind of prepaid type electronic money, to be able to obtain this prepaid type electronic money, and for a user to manage prepaid type electronic money of two or more kinds with a prepaid type electronic money conversion server.

[0019]The above-mentioned prepaid type electronic money conversion system, It is good also considering having further two or more issue terminals which publish each prepaid type electronic money, and a prepaid type electronic money conversion server being provided with an allowance storing means stored as an allowance which pays for a store terminal each prepaid type electronic money acquired from each issue terminal as a feature.

[0020]Thus, by storing a reserve for outstanding claims in an allowance storing means, the prepaid type

electronic money conversion server can respond, also when demand of prepaid type electronic money of a specific kind grows.

[0021]In the above-mentioned prepaid type electronic money conversion system, an allowance storing means is good also considering storing prepaid type electronic money which an issue terminal published to a user as a feature.

[0022]Thus, if composition which acquires prepaid type electronic money from a user, and can be stored in an allowance storing means is adopted, the prepaid type electronic money conversion server can buy the prepaid type electronic money with which a user received issue from an issue terminal directly. Thereby, at the time of this system introduction, a user stores in an allowance storing means of a prepaid type electronic money conversion server prepaid type electronic money owned itself, and he can use the part, saving it as the balance of a balance storing means according to user.

[0023]A prepaid type electronic money converting method concerning this invention, A prepaid type electronic money conversion server is a converting method which transforms prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds according to a user's demand, An issue stage where two or more issue terminals publish each prepaid type electronic money to a prepaid type electronic money conversion server, It requires that a user should transform prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, and a prepaid type electronic money conversion server is provided with a conversion stage of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds.

[0024]Thus, it can be used by having a conversion stage of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, being able to change each prepaid type electronic money published with two or more issue terminals in an issue stage. When this accesses a store terminal with a user and goods or service is purchased, even if it is a case where prepaid type electronic money of a predetermined kind which this user does not own is needed, it becomes unnecessary to receive issue of prepaid type electronic money of a predetermined kind anew. That is, with a prepaid type electronic money converting method concerning this invention, prepaid type electronic money which this user has already owned can be transformed into prepaid type electronic money of a predetermined kind, and desired goods or service can be purchased in this store terminal.

[0025]In a conversion stage, when the above-mentioned prepaid type electronic money converting method transforms prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, it is good also considering changing according to a conversion rate as a feature.

[0026]Thus, even if it is a case where worth (purchasing power) of each prepaid type electronic money differs mutually by changing a kind of each prepaid type electronic money based on a conversion rate, it becomes possible to change the kind.

[0027]The above-mentioned prepaid type electronic money converting method is good also considering having further a conversion rate determination stage of determining a conversion rate, based on frequency in use of each prepaid type electronic money as a feature.

[0028]Thus, by a conversion rate determination stage of defining a conversion rate based on frequency in use of each prepaid type electronic money, a proper conversion rate corresponding to demand of each prepaid type electronic money can be set up.

[0029]The above-mentioned prepaid type electronic money converting method, A prepaid type electronic money conversion server is further provided with a balance storing stage classified by user of storing the balance of each user's prepaid type electronic money for every kind of prepaid type electronic money, and it a conversion stage, Within the limits of the balance of prepaid type electronic money of a kind of 1 stored in a balance storing stage classified by user, it is good also considering transforming prepaid type electronic money of a kind of one into prepaid type electronic money of other kinds as a feature.

[0030]Thus, in a balance storing stage classified by user, the balance of prepaid type electronic money is easily manageable by storing the balance of each prepaid type electronic money which a user can use. In a conversion stage, the user can use prepaid type electronic money of a kind of 1 for prepaid type electronic money of other kinds by changing a ratio of the balance of each prepaid type electronic money stored in a balance storing stage classified by user, changing it.

[0031]The above-mentioned prepaid type electronic money converting method, An allowance storing stage where a prepaid type electronic money conversion server stores each prepaid type electronic money published in an issue stage, When a user purchases goods or service in a store terminal on a network, Pay for a store terminal prepaid type electronic money with which a prepaid type electronic money conversion server was stored in an allowance storing stage as goods or a price for service, and. It is good also considering having further a settlement-of-accounts stage which reduces the payment part amount equivalent from a user's balance stored in a balance storing stage classified by user as a feature.

[0032]In an allowance storing stage, an allowance which a prepaid type electronic money conversion server has is manageable by storing prepaid type electronic money published from each issue terminal. In a settlement-of-accounts stage, a prepaid type electronic money conversion server can manage individually an allowance storing means and a balance storing means according to user by [to a store terminal] paying and reducing the payment part amount equivalent from a balance storing means according to user.

[0033]The above-mentioned prepaid type electronic money converting method is good in an issue stage also considering an issue terminal storing prepaid type electronic money which published prepaid type electronic money to a user, and an issue terminal published to a user in an allowance storing stage as a feature.

[0034]Thus, since the prepaid type electronic money with which a user received issue from an issue terminal directly can be bought if it adopts with the ability of prepaid type electronic money to be acquired and stored from a user in an allowance storing stage, At the time of this system introduction, the user can utilize effectively prepaid type electronic money owned itself.

[0035]

[Embodiment of the Invention]Hereafter, the suitable embodiment of the prepaid type electronic money conversion system which starts this invention with a drawing is described in detail. In explanation of a drawing, identical codes are given to the same element and the overlapping explanation is omitted to it.

[0036]Drawing 1 is a figure showing the prepaid type electronic money conversion system 10 concerning this invention. The prepaid type electronic money conversion system 10, Issue terminal A-D which publishes prepaid type electronic money (henceforth "electronic money"), Store terminal a-d of the store which can use the electronic money which this issue terminal A-D published in concert with the issuer who has this issue terminal A-D, The Internet (network) 14 is accessed and the user terminal 12 for the user U to use electronic money and the prepaid type electronic money conversion server (henceforth a "conversion server") 20 for

which the user U is made to use electronic money are constituted.

[0037]Although A electronic money which issue terminal A-D publishes the electronic money of a kind different, respectively, and the issue terminal A publishes can be used with the store terminal a in which the issue terminal A ties up, it cannot be used by store terminal b-d. Each electronic money which issue terminal B-D publishes can also be used only by store terminal b-d with which each ties up similarly.

[0038]The conversion server 20 is provided with the following.

The allowance database (henceforth "the allowance DB") 21 which stores the balance of the electronic money purchased from each issue terminals A-D.

The balance database 22 according to user (henceforth "the balance DB according to user") with which each user U stored the balance of usable electronic money for every electronic money.

The money converter 23 which changes the kind of each electronic money.

The conversion rate database (henceforth "the conversion rate DB") 24 with which the conversion rate referred to when changing the kind of electronic money was stored is connected to the money converter 23, and the conversion rate deciding part 25 is further connected to conversion rate DB24.

[0039]Next, it explains, referring to a concrete example for each database of the conversion server 20. Allowance DB21 has each item of an "electronic money name", a "point size", "frequency in use", and "supplement possibility", as shown in drawing 2. An "electronic money name" is a name given to each electronic money, in order to classify each electronic money. Here, the conversion server 20 deals with four kinds of electronic money from A electronic money which issue terminal A-D publishes to D electronic money. A "point size" shows the point size which can pay the electronic money of relevance of the conversion server 20, i.e., the balance of each electronic money. For example, about A electronic money, it is shown that the payment up to 100000 points (the unit of a point is hereafter indicated to be "pt") is possible for the conversion server 20. "Frequency in use" shows how many the electronic money is used, and "supplement possibility" shows the rule of thumb which supplements allowance DB21 with the electronic money of relevance.

[0040]Next, balance DB22 classified by user has each item of a "membership number", "ID", "PASSWORD", "the total amount in terms of the yen", and the usable point (the remaining point) for every electronic money, as shown in drawing 3. "The membership number of the number for cutting down the member (user U) registered into the conversion server 20 and "ID"" is a code for each member to access an identification number for the conversion server 20 to identify each member and "PASSWORD" at the conversion server 20. And "the total amount in terms of the yen" carries out in terms of the yen [of the balance of each electronic money], and totals it. For example, the total amount in terms of the yen of the balance of the user's FFF (membership number 1) electronic money is 80000 yen, in 100pt and B electronic money, 300pt and C electronic money serve as 50pt, and, as for the items, D electronic money serves as [A electronic money] 50pt.

[0041]Next, conversion rate DB24 is explained. Conversion rate DB24 can store a conversion rate when transforming the electronic money of the kind of 1 into the electronic money of other kinds, and can change the electronic money of a kind with which value (purchasing power) differs by this. For example, the unit price per 1pt of each electronic money presupposes that it was a price shown in drawing 4. In this case, to A electronic money being 100 yen per pt, since B electronic money is 200 yen per pt, 1pt of A electronic

money is equivalent to 0.5pt of B electronic money. That is, both 1pt of A electronic money and 0.5pt of B electronic money change to 100 yen by in terms of the yen. Therefore, if A electronic money is increased 0.5 times and it is considered as B electronic money when transforming A electronic money into B electronic money, it will mean that each electronic money was changed properly. Based on such a view, conversion rate DB24 shown in drawing 5 is created. If the magnifications at the time of conversion are enumerated in the transverse direction and refer to this conversion rate DB24 in the table of conversion rate DB24 shown in drawing 5, For example, when transforming A electronic money into B electronic money and transforming A electronic money into C electronic money for 0.5, it turns out that what is necessary is just to multiply by 2.0 A electronic money which is a changing agency about 0.66 when transforming A electronic money into D electronic money.

[0042]Next, the embodiment of the prepaid type electronic money converting method of this invention is collectively explained and described about settlement of the prepaid type electronic money conversion system 10 concerning this embodiment flowing. Drawing 6 is a flow chart which shows the flow of settlement of the prepaid type electronic money conversion system 10.

[0043]First, the conversion server 20 requests issue of each electronic money to each issue terminal A-D (S10). each issue terminal A-D -- a request of the conversion server 20 to electronic money -- taking charge (S12) -- electronic money is published to the conversion server 20 (S14). The electronic money published here is prepaid type electronic money, and each issue terminal A-D gives ID required in the case of electronic money use to the conversion server 20. The conversion server 20 manages given ID, and it is stored in allowance DB21 which shows drawing 2 the balance of the electronic money corresponding to each ID (S16).

[0044]Next, the user U who wants to use two or more kinds of electronic money requests membership registration from the conversion server 20 (S18). The conversion server 20 which received the request of membership registration from the user U registers this user U as a member (S20). That is, a membership number is given to this user U and this user U is registered into balance DB22 classified by user shown in drawing 3 with ID and PASSWORD (S20). Under the present circumstances, the items of the balance of each electronic money are defined according to the user's U hope.

[0045]The user U registered into the conversion server 20 peruses the goods currently accessed and opened to store terminal a-d connected to the Internet 14 (S22, S24), and checks the price of goods, and the kind of electronic money in which payment is possible with the contents of goods (S26, S28).

[0046]Here, about conversion of the kind of electronic money, the user FFF (refer to the membership number 1 and drawing 3) who is one of the registered users U is made into an example, and is explained. Suppose that the user FFF wants to buy the goods of 320pt with the store terminal b. Although the electronic money which can be used in the store terminal b is B electronic money, only 300pt has the user FFF (refer to drawing 3), and, under the present circumstances, he cannot buy B electronic money. Then, the user FFF requires the conversion server 20 to change the kind of electronic money (S30). Here, the conversion server 20 shall be required to change 40pt of A electronic money into B electronic money. The conversion server 20 changes the kind of electronic money in response to a conversion request (S32). Conversion of the kind of electronic money is performed when the money converter 23 changes the items of balance DB22 classified by user with reference to conversion rate DB24. That is, 40pt subtraction is carried out from the

balance of A electronic money, and with reference to conversion rate DB24 shown in drawing 5, 40pt is multiplied by 0.5, and it adds to the balance of B electronic money. By this, the balance DB according to user shown in drawing 3 is changed, as shown in drawing 7, and as for the balance of the user's FFF A electronic money, the balance of 60pt and B electronic money serves as 320pt.

[0047]then -- the user FFF demands the payment of the price for goods from the conversion server 20 (S34) -- the conversion server 20 -- the price payment demand from the user FFF -- receiving (S36) -- 320pt is paid for the store terminal b with B electronic money (S38). The conversion server 20 shows the store terminal b ID given from the issue terminal B, and payment is made. The conversion server 20 pulls down 320pt from B electronic money remainder of the user FFF of balance DB22 classified by user, after paying a price for the store terminal b (S42). on the other hand -- the store terminal b -- a price -- receiving (S40) -- goods are handed over to the user FFF by the method of downloading or shipping (S44, S46).

[0048]By changing the kind of electronic money with the conversion server 20 as mentioned above, the user U can do some shopping by store terminal a-d which needs the electronic money of a different kind. Then, store terminal a-d requests from issue terminal A-D liquidation of the electronic money acquired as a price for goods (S48). issue terminal A-D -- a liquidation request of store terminal a-d to electronic money -- taking charge (S50) -- electronic money is realized, cash is paid to store terminal (S52) a-d, the store terminals a-d receive this (S54), and settlement of accounts is completed.

[0049]Next, the deciding method of the conversion rate by the conversion rate deciding part 25 at the time of changing the kind of electronic money is explained, referring to drawing 8. The frequency in use of each electronic money serves as a parameter of conversion rate determination, and, as for a conversion rate, the conversion rate deciding part 25 is determined with reference to allowance DB21. When each item of the table shown in drawing 8 is explained, a "base rate" is pt unit price used as the calculation foundation of the conversion rate, i.e., the conversion rate currently used for old, before a conversion rate is determined by the conversion rate deciding part 25. The "purchase point 1" and the "purchase point 2" are data which calculates transition of how many each electronic money are purchased (use), and the point by which "the purchase point 1" was purchased 2 - three weeks ago, and the "purchase point 2" are points purchased 1 - two weeks ago here.

[0050]First, the transition rate of the electronic money of relevance is computed from the purchase point 1 and the purchase point 2. A transition rate is computed by a transition rate = (purchase point 2-purchase point 1) / purchase point 1. For example, A electronic money is set to = [the transition rate (A)] (2800-2000) / 2000=0.4. Thus, a transition rate is computed about the sum total point which totaled each electronic money and each electronic money. Then, point change is computed according to the difference of the transition rate of a sum total point, and the transition rate for every electronic money. It will be set to point change (A) =0.4-0.19=0.21 if A electronic money is made into an example. Thus, point change of each electronic money is computed. And this point change is multiplied by a predetermined constant (here 10), and pt unit price which serves as the calculation foundation of a conversion rate in addition to a base rate is computed. By such a method, pt unit price of each electronic money is computed, and a conversion rate is determined based on this. pt unit price will rise about the electronic money of the kind used frequently by this, pt unit price will descend about the electronic money of the kind which is not used, and rationalization of a conversion rate will be attained. The method shown above is one technique of making the frequency in

use of each electronic money reflect in a conversion rate, and is good also as using other methods.

[0051]Then, the effect of the conversion server 20 concerning this embodiment, prepaid type electronic money conversion system, and a prepaid type electronic money converting method is explained.

[0052]While the conversion server 20 concerning this embodiment manages the balance of each electronic money which was provided with allowance DB21 and acquired from each issue terminal A-D, it has managed each electronic money remainder which is provided with balance DB22 classified by user, and each user U can use. And the kind of electronic money which the user U can use is convertible by changing the items of each electronic money of balance DB22 classified by user. Thereby, since the user U can change the kind of electronic money with the conversion server 20 even if he does not receive issue of electronic money from each issue terminal A-D individually, management of electronic money becomes easy.

[0053]Namely, when the electronic money with which kinds differ was used in the conventional prepaid type electronic money system, since it was necessary to receive issue of electronic money from each issue terminal A-D, there was complicatedness of having to manage each ID, but. If only ID for the user U to access the conversion server 20 according to the prepaid type electronic money conversion system 10 of this embodiment containing the conversion server 20 is managed, two or more kinds of electronic money can be used.

[0054]Since only the goods of a low price can be purchased in the conventional prepaid type electronic money system from the balance which ran short if the balance of the electronic money of the kind of 1 decreases, the width of the commodity selection by the electronic money of this kind will be narrowed remarkably, but. Since the electronic money of the kind of 1 is convertible for the electronic money of other kinds according to the prepaid type electronic money conversion system 10 of this embodiment containing the prepaid type electronic money conversion server 20, the electronic money which ran short is also effectively utilizable.

[0055]According to the prepaid type electronic money converting method of this embodiment, like the above, it becomes easy to manage the user U of electronic money, and even if the electronic money of the kind of 1 decreases in number, he can use it, being able to change into the electronic money of other kinds.

[0056]Next, a 2nd embodiment of the prepaid type electronic money conversion system concerning this invention is described. Although the composition with as fundamental prepaid type electronic money conversion system of a 2nd embodiment as the prepaid type electronic money conversion system of a 1st embodiment is the same, the contents of user balance DB32 which the conversion server 20 has differ. It explains referring to drawing 9 in which balance DB32 classified by user contained in the conversion server 20 of a 2nd embodiment is shown about this point. The balance according to each electronic money does not have balance DB32 classified by user, but the balance is shown as integrated electronic money for balance management which unified each electronic money. Conversion with each electronic money and integrated electronic money is changed according to the conversion rate stored in conversion rate DB24 like the case of a 1st embodiment.

[0057]Thus, since the user U itself does not need to manage the balance for every electronic money by constituting balance DB32 classified by user with integrated electronic money, improvement in the convenience of the conversion server 20 can be aimed at. In this embodiment, although different electronic

money for balance management from the electronic money which each issue terminals A-D publish as integrated electronic money was newly founded, it is not necessary to necessarily found integrated electronic money. That is, it is good also as transforming other electronic money into A electronic money by using A electronic money of a 1st embodiment as integrated electronic money, for example.

[0058]Next, a 3rd embodiment of the prepaid type electronic money conversion system of this invention is described. Although the composition with as fundamental prepaid type electronic money conversion system of a 3rd embodiment as the prepaid type electronic money conversion system 10 of a 1st embodiment is the same, the contents of allowance DB41 which the conversion server 20 has differ. Drawing 10 is a figure showing allowance DB41 contained in the conversion server 20 of a 3rd embodiment. Allowance DB41 of a 3rd embodiment is constituted by the set of the electronic money of plurality [electronic money / of the kind of 1]. That is, the electronic money of the kind of 1 is managed by two or more ID. For example, 1500pt is managed by ID of 5400pt and KKK by ID of JJJ at ID of 260pt and LLL, and A electronic money serves as 101215pt in total. Thus, by having allowance DB41 of composition of that the electronic money of the kind of 1 is manageable by two or more ID, prepaid type electronic money conversion system can be employed as follows.

[0059]Drawing 11 is a flow chart which shows employment of prepaid type electronic money conversion system. Below, the user JJJ who is one of the users U is taken up for an example, and it explains concretely. First, the user JJJ requests issue of electronic money from the issue terminal A (S60). the issue terminal A -- a request -- taking charge (S62) -- publishing A electronic money to the user JJJ (S64) the user JJJ acquires A electronic money (S66).

[0060]And the user JJJ requests membership registration from the conversion server 20 (S68), and the conversion server 20 registers the user JJJ into balance DB42 classified by user (S70). Since the user JJJ can use the electronic money of two or more kinds with the conversion server 20 if it registers with the conversion server 20, the necessity of continuing and owning A electronic money acquired individually does not almost have him. In such a case, since allowance DB41 can manage the electronic money of the kind of 1 by two or more ID in this embodiment, the electronic money which the user JJJ owns can be taken over. That is, if the electronic money which the user JJJ owns is transferred to the conversion server 20, in the conversion server 20, the balance of the electronic money taken over to allowance DB41 can be stored (refer to drawing 10), and it can add to the balance DB according to user of the user JJJ who transferred this electronic money (refer to drawing 12). Thereby, the user JJJ can store in user balance DB42 the electronic money individually owned in response to issue, and can change the kind of electronic money. By drawing 10, since it is easy, ID of the electronic money which the user JJJ owned has been indicated as JJJ.

[0061]With such a prepaid type electronic money system, this system can be joined the user U who has electronic money individually from before subscription utilizing this electronic money for this system effectively, and convenience will improve.

[0062]As mentioned above, although the embodiment of this invention has been described in detail, this invention is not limited to the above-mentioned embodiment.

[0063]In a 1st embodiment of the above, although the conversion rate deciding part 25 supposes that a conversion rate will be determined based on the frequency in use of each electronic money, it is good also as the user U determining a conversion rate based on the frequency which uses electronic money. That is, it

is good also as computing a conversion rate by assigning lower than usual pt unit price of the electronic money of a converting destination to the user U with a high capacity factor of electronic money as a privilege.

[0064]To necessarily not have to change a conversion rate and use a fixed conversion rate, the conversion rate deciding part 25 is unnecessary.

[0065]

[Effect of the Invention]The prepaid type electronic money conversion system of this invention, Have the user terminal for a user to use prepaid type electronic money and the prepaid type electronic money conversion server, and this prepaid type electronic money conversion server, The prepaid type electronic money of the kind of one is convertible for the prepaid type electronic money of other kinds among two or more kinds of prepaid type electronic money. Thereby, the user can use two or more prepaid type electronic money integrative by using the user terminal connected with the prepaid type electronic money conversion server by the network.

[0066]Since the prepaid type electronic money of a different kind published with two or more issue terminals is mutually convertible in a conversion stage according to the prepaid type electronic money converting method of this invention, The user can use two or more prepaid type electronic money integrative like the above.

[Translation done.]

* NOTICES *

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TECHNICAL FIELD

[Field of the Invention]This invention relates to the prepaid type electronic money used on the Internet etc.

[Translation done.]

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PRIOR ART

[Description of the Prior Art]From the former, micropayment-oriented prepaid type electronic money is known as a payment system on networks, such as the Internet. As for prepaid type electronic money, settlement of accounts is performed by the following systems. First, the user of prepaid type electronic money purchases the prepaid type electronic money of a constant sum in the form of ID from a prepaid entrepreneur. And if a user inputs ID when a user does some shopping on networks, such as the Internet, it is the structure whose balance of prepaid type electronic money decreases as a price for shopping.

[Translation done.]

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EFFECT OF THE INVENTION

[Effect of the Invention]The prepaid type electronic money conversion system of this invention is provided with the user terminal for a user to use prepaid type electronic money and the prepaid type electronic money conversion server.

This prepaid type electronic money conversion server can transform the prepaid type electronic money of the kind of one into the prepaid type electronic money of other kinds among two or more kinds of prepaid type electronic money.

Thereby, the user can use two or more prepaid type electronic money integrative by using the user terminal connected with the prepaid type electronic money conversion server by the network.

[0066]Since the prepaid type electronic money of a different kind published with two or more issue terminals is mutually convertible in a conversion stage according to the prepaid type electronic money converting method of this invention, The user can use two or more prepaid type electronic money integrative like the above.

[Translation done.]

TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention]However, the above-mentioned prepaid type electronic money had the following problems in respect of the distribution channel. That is, prepaid type electronic money has been used only at the store where the prepaid entrepreneur who publishes prepaid type electronic money has tied up. To do some shopping at stores other than the store where the prepaid entrepreneur of 1 which is an issuer of the prepaid type electronic money which a user owns ties up by this. The user had to receive issue of prepaid type electronic money from another prepaid entrepreneur who has tied up with the store to buy, and was inconvenient.
[0004]Then, this invention solves an aforementioned problem and it aims at providing the prepaid type electronic money conversion server and prepaid type electronic money conversion system which can aim at integration of a distribution channel, and a prepaid type electronic money converting method.

[Translation done.]

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MEANS

[Means for Solving the Problem]A prepaid type electronic money conversion server concerning this invention, It is the server connected by user who uses two or more kinds of prepaid type electronic money, and a network, and has a conversion method which transforms prepaid type electronic money of a kind of one into prepaid type electronic money of other kinds among two or more kinds of prepaid type electronic money.

[0006]Thus, a user who uses two or more kinds of prepaid type electronic money, By connecting a prepaid type electronic money conversion server which has a conversion method which changes a kind of each prepaid type electronic money mutually by a network, prepaid type electronic money which a user owns is convertible for prepaid type electronic money of a desired kind. When this accesses a store terminal with a user, goods or service is purchased and prepaid type electronic money of a predetermined kind which this user does not own is needed, it becomes unnecessary to receive issue of prepaid type electronic money of a predetermined kind anew. That is, prepaid type electronic money which this user has already owned can be transformed into prepaid type electronic money of a predetermined kind using a prepaid type electronic money conversion server connected by a network, and desired goods or service can be purchased in this store terminal.

[0007]Have further a conversion rate storing means which stores a conversion rate at the time of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, and a conversion method, It is good also considering transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds according to a conversion rate stored in a conversion rate storing means as a feature.

[0008]Thus, even if it is a case where worth (purchasing power) of each prepaid type electronic money differs mutually by changing a kind of each prepaid type electronic money based on a conversion rate stored in a conversion rate storing means, it becomes possible to change the kind.

[0009]The above-mentioned prepaid type electronic money conversion server, Based on frequency in use of each prepaid type electronic money, it has further a conversion rate determination means to determine a conversion rate at the time of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, A conversion rate storing means is good also considering storing a conversion rate determined by a conversion rate determination means as a feature.

[0010]Thus, when a conversion rate determination means defines a conversion rate based on frequency in

use of each prepaid type electronic money, a proper conversion rate can be set up corresponding to demand of each prepaid type electronic money.

[0011]The above-mentioned prepaid type electronic money conversion server, Have further a balance storing means according to user which stores the balance of each prepaid type electronic money which a user can use for every kind of each prepaid type electronic money, and a conversion method, Within the limits of the balance of prepaid type electronic money of a kind of 1 stored in a balance storing means according to user, it is good also considering transforming prepaid type electronic money of a kind of one into prepaid type electronic money of other kinds as a feature.

[0012]Thus, by having a balance storing means according to user, the prepaid type electronic money conversion server can manage the balance of each prepaid type electronic money which a user can use. When a prepaid type electronic money conversion server changes a ratio of the balance of each prepaid type electronic money stored in a balance storing means according to user, the user can use prepaid type electronic money of a kind of 1 for prepaid type electronic money of other kinds, changing it.

[0013]The above-mentioned prepaid type electronic money conversion server, It is good also considering having further a balance storing means according to user which changes into a specific kind of prepaid type electronic money the balance of each prepaid type electronic money which a user can use by a conversion method, and stores the balance of a specific kind of changed prepaid type electronic money as a feature.

[0014]Thus, by transforming into a specific kind of prepaid type electronic money each prepaid type electronic money which a user can use, and storing in a balance storing means according to user, a total amount of the balance of prepaid type electronic money can be easily grasped on the basis of this prepaid type electronic money. Specific prepaid type electronic money of a kind may be electronic money for balance management which a prepaid type electronic money conversion server establishes.

[0015]This invention is characterized by prepaid type electronic money conversion system comprising the following, in order that a user may use two or more kinds of prepaid type electronic money.
User terminal.
The above-mentioned prepaid type electronic money conversion server connected with a user terminal by a network.

[0016]Thus, when a user terminal for a user to use two or more kinds of prepaid type electronic money and the above-mentioned prepaid type electronic money conversion server constitute a system connected by a network, The user can use prepaid type electronic money of a kind of 1 for prepaid type electronic money of other kinds, changing it.

[0017]Prepaid type electronic money conversion system, A user terminal for a user to use two or more kinds of prepaid type electronic money, Prepaid type electronic money of a kind of at least 1 of each prepaid type electronic money An usable store terminal, It has the above-mentioned prepaid type electronic money conversion server connected with a user terminal and a store terminal by a network, When a user accesses a store terminal and purchases goods or service with a user terminal, a prepaid type electronic money conversion server, In a store terminal, an usable kind of prepaid type electronic money is paid for a store terminal as goods or a price for service, and it is good also considering reducing the payment part amount equivalent from the balance of a user's prepaid type electronic money stored in a balance storing means

according to user as a feature.

[0018]A user terminal for a user to use prepaid type electronic money, as for a system concerning this invention, A store terminal which does some shopping by a user accessing, and the above-mentioned prepaid type electronic money conversion server constitute a system connected by a network, When a user accesses a store terminal and does some shopping (i.e., when using prepaid type electronic money), A prepaid type electronic money conversion server pays a price for a store terminal, and it is supposed that prepaid type electronic money equivalent to the price will be reduced from the balance stored in this user's balance storing means according to user. When a user does not have a required kind of prepaid type electronic money in a balance storing means according to user in each store terminal or it runs short by this, It becomes unnecessary to change a kind of prepaid type electronic money, to be able to obtain this prepaid type electronic money, and for a user to manage prepaid type electronic money of two or more kinds with a prepaid type electronic money conversion server.

[0019]The above-mentioned prepaid type electronic money conversion system, It is good also considering having further two or more issue terminals which publish each prepaid type electronic money, and a prepaid type electronic money conversion server being provided with an allowance storing means stored as an allowance which pays for a store terminal each prepaid type electronic money acquired from each issue terminal as a feature.

[0020]Thus, by storing a reserve for outstanding claims in an allowance storing means, the prepaid type electronic money conversion server can respond, also when demand of prepaid type electronic money of a specific kind grows.

[0021]In the above-mentioned prepaid type electronic money conversion system, an allowance storing means is good also considering storing prepaid type electronic money which an issue terminal published to a user as a feature.

[0022]Thus, if composition which acquires prepaid type electronic money from a user, and can be stored in an allowance storing means is adopted, the prepaid type electronic money conversion server can buy the prepaid type electronic money with which a user received issue from an issue terminal directly. Thereby, at the time of this system introduction, a user stores in an allowance storing means of a prepaid type electronic money conversion server prepaid type electronic money owned itself, and he can use the part, saving it as the balance of a balance storing means according to user.

[0023]A prepaid type electronic money converting method concerning this invention, A prepaid type electronic money conversion server is a converting method which transforms prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds according to a user's demand, An issue stage where two or more issue terminals publish each prepaid type electronic money to a prepaid type electronic money conversion server, It requires that a user should transform prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, and a prepaid type electronic money conversion server is provided with a conversion stage of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds.

[0024]Thus, it can be used by having a conversion stage of transforming prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, being able to change each prepaid type electronic money published with two or more issue terminals in an issue stage. When this accesses a store

terminal with a user and goods or service is purchased, even if it is a case where prepaid type electronic money of a predetermined kind which this user does not own is needed, it becomes unnecessary to receive issue of prepaid type electronic money of a predetermined kind anew. That is, with a prepaid type electronic money converting method concerning this invention, prepaid type electronic money which this user has already owned can be transformed into prepaid type electronic money of a predetermined kind, and desired goods or service can be purchased in this store terminal.

[0025]In a conversion stage, when the above-mentioned prepaid type electronic money converting method transforms prepaid type electronic money of a kind of 1 into prepaid type electronic money of other kinds, it is good also considering changing according to a conversion rate as a feature.

[0026]Thus, even if it is a case where worth (purchasing power) of each prepaid type electronic money differs mutually by changing a kind of each prepaid type electronic money based on a conversion rate, it becomes possible to change the kind.

[0027]The above-mentioned prepaid type electronic money converting method is good also considering having further a conversion rate determination stage of determining a conversion rate, based on frequency in use of each prepaid type electronic money as a feature.

[0028]Thus, by a conversion rate determination stage of defining a conversion rate based on frequency in use of each prepaid type electronic money, a proper conversion rate corresponding to demand of each prepaid type electronic money can be set up.

[0029]The above-mentioned prepaid type electronic money converting method, A prepaid type electronic money conversion server is further provided with a balance storing stage classified by user of storing the balance of each user's prepaid type electronic money for every kind of prepaid type electronic money, and it a conversion stage, Within the limits of the balance of prepaid type electronic money of a kind of 1 stored in a balance storing stage classified by user, it is good also considering transforming prepaid type electronic money of a kind of one into prepaid type electronic money of other kinds as a feature.

[0030]Thus, in a balance storing stage classified by user, the balance of prepaid type electronic money is easily manageable by storing the balance of each prepaid type electronic money which a user can use. In a conversion stage, the user can use prepaid type electronic money of a kind of 1 for prepaid type electronic money of other kinds by changing a ratio of the balance of each prepaid type electronic money stored in a balance storing stage classified by user, changing it.

[0031]The above-mentioned prepaid type electronic money converting method, An allowance storing stage where a prepaid type electronic money conversion server stores each prepaid type electronic money published in an issue stage, When a user purchases goods or service in a store terminal on a network, Pay for a store terminal prepaid type electronic money with which a prepaid type electronic money conversion server was stored in an allowance storing stage as goods or a price for service, and. It is good also considering having further a settlement-of-accounts stage which reduces the payment part amount equivalent from a user's balance stored in a balance storing stage classified by user as a feature.

[0032]In an allowance storing stage, an allowance which a prepaid type electronic money conversion server has is manageable by storing prepaid type electronic money published from each issue terminal. In a settlement-of-accounts stage, a prepaid type electronic money conversion server can manage individually an allowance storing means and a balance storing means according to user by [to a store terminal] paying

and reducing the payment part amount equivalent from a balance storing means according to user.

[0033]The above-mentioned prepaid type electronic money converting method is good in an issue stage also considering an issue terminal storing prepaid type electronic money which published prepaid type electronic money to a user, and an issue terminal published to a user in an allowance storing stage as a feature.

[0034]Thus, since the prepaid type electronic money with which a user received issue from an issue terminal directly can be bought if it adopts with the ability of prepaid type electronic money to be acquired and stored from a user in an allowance storing stage, At the time of this system introduction, the user can utilize effectively prepaid type electronic money owned itself.

[0035]

[Embodiment of the Invention]Hereafter, the suitable embodiment of the prepaid type electronic money conversion system which starts this invention with a drawing is described in detail. In explanation of a drawing, identical codes are given to the same element and the overlapping explanation is omitted to it.

[0036]Drawing 1 is a figure showing the prepaid type electronic money conversion system 10 concerning this invention. The prepaid type electronic money conversion system 10, Issue terminal A-D which publishes prepaid type electronic money (henceforth "electronic money"), Store terminal a-d of the store which can use the electronic money which this issue terminal A-D published in concert with the issuer who has this issue terminal A-D, The Internet (network) 14 is accessed and the user terminal 12 for the user U to use electronic money and the prepaid type electronic money conversion server (henceforth a "conversion server") 20 for which the user U is made to use electronic money are constituted.

[0037]Although A electronic money which issue terminal A-D publishes the electronic money of a kind different, respectively, and the issue terminal A publishes can be used with the store terminal a in which the issue terminal A ties up, it cannot be used by store terminal b-d. Each electronic money which issue terminal B-D publishes can also be used only by store terminal b-d with which each ties up similarly.

[0038]The conversion server 20 is provided with the following.

The allowance database (henceforth "the allowance DB") 21 which stores the balance of the electronic money purchased from each issue terminals A-D.

The balance database 22 according to user (henceforth "the balance DB according to user") with which each user U stored the balance of usable electronic money for every electronic money.

The money converter 23 which changes the kind of each electronic money.

The conversion rate database (henceforth "the conversion rate DB") 24 with which the conversion rate referred to when changing the kind of electronic money was stored is connected to the money converter 23, and the conversion rate deciding part 25 is further connected to conversion rate DB24.

[0039]Next, it explains, referring to a concrete example for each database of the conversion server 20. Allowance DB21 has each item of an "electronic money name", a "point size", "frequency in use", and "supplement possibility", as shown in drawing 2. An "electronic money name" is a name given to each electronic money, in order to classify each electronic money. Here, the conversion server 20 deals with four kinds of electronic money from A electronic money which issue terminal A-D publishes to D electronic money. A "point size" shows the point size which can pay the electronic money of relevance of the conversion server 20, i.e., the balance of each electronic money. For example, about A electronic money, it is shown that the payment up to 100000 points (the unit of a point is hereafter indicated to be "pt") is

possible for the conversion server 20. "Frequency in use" shows how many the electronic money is used, and "supplement possibility" shows the rule of thumb which supplements allowance DB21 with the electronic money of relevance.

[0040]Next, balance DB22 classified by user has each item of a "membership number", "ID", "PASSWORD", "the total amount in terms of the yen", and the usable point (the remaining point) for every electronic money, as shown in drawing 3. "The membership number of the number for cutting down the member (user U) registered into the conversion server 20 and "ID"" is a code for each member to access an identification number for the conversion server 20 to identify each member and "PASSWORD" at the conversion server 20. And "the total amount in terms of the yen" carries out in terms of the yen [of the balance of each electronic money], and totals it. For example, the total amount in terms of the yen of the balance of the user's FFF (membership number 1) electronic money is 80000 yen, in 100pt and B electronic money, 300pt and C electronic money serve as 50pt, and, as for the items, D electronic money serves as [A electronic money] 50pt.

[0041]Next, conversion rate DB24 is explained. Conversion rate DB24 can store a conversion rate when transforming the electronic money of the kind of 1 into the electronic money of other kinds, and can change the electronic money of a kind with which value (purchasing power) differs by this. For example, the unit price per 1pt of each electronic money presupposes that it was a price shown in drawing 4. In this case, to A electronic money being 100 yen per pt, since B electronic money is 200 yen per pt, 1pt of A electronic money is equivalent to 0.5pt of B electronic money. That is, both 1pt of A electronic money and 0.5pt of B electronic money change to 100 yen by in terms of the yen. Therefore, if A electronic money is increased 0.5 times and it is considered as B electronic money when transforming A electronic money into B electronic money, it will mean that each electronic money was changed properly. Based on such a view, conversion rate DB24 shown in drawing 5 is created. If the magnifications at the time of conversion are enumerated in the transverse direction and refer to this conversion rate DB24 in the table of conversion rate DB24 shown in drawing 5, For example, when transforming A electronic money into B electronic money and transforming A electronic money into C electronic money for 0.5, it turns out that what is necessary is just to multiply by 2.0 A electronic money which is a changing agency about 0.66 when transforming A electronic money into D electronic money.

[0042]Next, the embodiment of the prepaid type electronic money converting method of this invention is collectively explained and described about settlement of the prepaid type electronic money conversion system 10 concerning this embodiment flowing. Drawing 6 is a flow chart which shows the flow of settlement of the prepaid type electronic money conversion system 10.

[0043]First, the conversion server 20 requests issue of each electronic money to each issue terminal A-D (S10). each issue terminal A-D -- a request of the conversion server 20 to electronic money -- taking charge (S12) -- electronic money is published to the conversion server 20 (S14). The electronic money published here is prepaid type electronic money, and each issue terminal A-D gives ID required in the case of electronic money use to the conversion server 20. The conversion server 20 manages given ID, and it is stored in allowance DB21 which shows drawing 2 the balance of the electronic money corresponding to each ID (S16).

[0044]Next, the user U who wants to use two or more kinds of electronic money requests membership

registration from the conversion server 20 (S18). The conversion server 20 which received the request of membership registration from the user U registers this user U as a member (S20). That is, a membership number is given to this user U and this user U is registered into balance DB22 classified by user shown in drawing 3 with ID and PASSWORD (S20). Under the present circumstances, the items of the balance of each electronic money are defined according to the user's U hope.

[0045]The user U registered into the conversion server 20 peruses the goods currently accessed and opened to store terminal a-d connected to the Internet 14 (S22, S24), and checks the price of goods, and the kind of electronic money in which payment is possible with the contents of goods (S26, S28).

[0046]Here, about conversion of the kind of electronic money, the user FFF (refer to the membership number 1 and drawing 3) who is one of the registered users U is made into an example, and is explained. Suppose that the user FFF wants to buy the goods of 320pt with the store terminal b. Although the electronic money which can be used in the store terminal b is B electronic money, only 300pt has the user FFF (refer to drawing 3), and, under the present circumstances, he cannot buy B electronic money. Then, the user FFF requires the conversion server 20 to change the kind of electronic money (S30). Here, the conversion server 20 shall be required to change 40pt of A electronic money into B electronic money. The conversion server 20 changes the kind of electronic money in response to a conversion request (S32). Conversion of the kind of electronic money is performed when the money converter 23 changes the items of balance DB22 classified by user with reference to conversion rate DB24. That is, 40pt subtraction is carried out from the balance of A electronic money, and with reference to conversion rate DB24 shown in drawing 5, 40pt is multiplied by 0.5, and it adds to the balance of B electronic money. By this, the balance DB according to user shown in drawing 3 is changed, as shown in drawing 7, and as for the balance of the user's FFF A electronic money, the balance of 60pt and B electronic money serves as 320pt.

[0047]then -- the user FFF demands the payment of the price for goods from the conversion server 20 (S34) -- the conversion server 20 -- the price payment demand from the user FFF -- receiving (S36) -- 320pt is paid for the store terminal b with B electronic money (S38). The conversion server 20 shows the store terminal b ID given from the issue terminal B, and payment is made. The conversion server 20 pulls down 320pt from B electronic money remainder of the user FFF of balance DB22 classified by user, after paying a price for the store terminal b (S42). on the other hand -- the store terminal b -- a price -- receiving (S40) -- goods are handed over to the user FFF by the method of downloading or shipping (S44, S46).

[0048]By changing the kind of electronic money with the conversion server 20 as mentioned above, the user U can do some shopping by store terminal a-d which needs the electronic money of a different kind. Then, store terminal a-d requests from issue terminal A-D liquidation of the electronic money acquired as a price for goods (S48). issue terminal A-D -- a liquidation request of store terminal a-d to electronic money -- taking charge (S50) -- electronic money is realized, cash is paid to store terminal (S52) a-d, the store terminals a-d receive this (S54), and settlement of accounts is completed.

[0049]Next, the deciding method of the conversion rate by the conversion rate deciding part 25 at the time of changing the kind of electronic money is explained, referring to drawing 8. The frequency in use of each electronic money serves as a parameter of conversion rate determination, and, as for a conversion rate, the conversion rate deciding part 25 is determined with reference to allowance DB21. When each item of the table shown in drawing 8 is explained, a "base rate" is pt unit price used as the calculation foundation of the

conversion rate, i.e., the conversion rate currently used for old, before a conversion rate is determined by the conversion rate deciding part 25. The "purchase point 1" and the "purchase point 2" are data which calculates transition of how many each electronic money are purchased (use), and the point by which "the purchase point 1" was purchased 2 - three weeks ago, and the "purchase point 2" are points purchased 1 - two weeks ago here.

[0050]First, the transition rate of the electronic money of relevance is computed from the purchase point 1 and the purchase point 2. A transition rate is computed by a transition rate = (purchase point 2-purchase point 1) / purchase point 1. For example, A electronic money is set to = [the transition rate (A)] (2800-2000) / 2000=0.4. Thus, a transition rate is computed about the sum total point which totaled each electronic money and each electronic money. Then, point change is computed according to the difference of the transition rate of a sum total point, and the transition rate for every electronic money. It will be set to point change (A) =0.4-0.19=0.21 if A electronic money is made into an example. Thus, point change of each electronic money is computed. And this point change is multiplied by a predetermined constant (here 10), and pt unit price which serves as the calculation foundation of a conversion rate in addition to a base rate is computed. By such a method, pt unit price of each electronic money is computed, and a conversion rate is determined based on this. pt unit price will rise about the electronic money of the kind used frequently by this, pt unit price will descend about the electronic money of the kind which is not used, and rationalization of a conversion rate will be attained. The method shown above is one technique of making the frequency in use of each electronic money reflect in a conversion rate, and is good also as using other methods.

[0051]Then, the effect of the conversion server 20 concerning this embodiment, prepaid type electronic money conversion system, and a prepaid type electronic money converting method is explained.

[0052]While the conversion server 20 concerning this embodiment manages the balance of each electronic money which was provided with allowance DB21 and acquired from each issue terminal A-D, it has managed each electronic money remainder which is provided with balance DB22 classified by user, and each user U can use. And the kind of electronic money which the user U can use is convertible by changing the items of each electronic money of balance DB22 classified by user. Thereby, since the user U can change the kind of electronic money with the conversion server 20 even if he does not receive issue of electronic money from each issue terminal A-D individually, management of electronic money becomes easy.

[0053]Namely, when the electronic money with which kinds differ was used in the conventional prepaid type electronic money system, since it was necessary to receive issue of electronic money from each issue terminal A-D, there was complicatedness of having to manage each ID, but. If only ID for the user U to access the conversion server 20 according to the prepaid type electronic money conversion system 10 of this embodiment containing the conversion server 20 is managed, two or more kinds of electronic money can be used.

[0054]Since only the goods of a low price can be purchased in the conventional prepaid type electronic money system from the balance which ran short if the balance of the electronic money of the kind of 1 decreases, the width of the commodity selection by the electronic money of this kind will be narrowed remarkably, but. Since the electronic money of the kind of 1 is convertible for the electronic money of other kinds according to the prepaid type electronic money conversion system 10 of this embodiment containing

the prepaid type electronic money conversion server 20, the electronic money which ran short is also effectively utilizable.

[0055]According to the prepaid type electronic money converting method of this embodiment, like the above, it becomes easy to manage the user U of electronic money, and even if the electronic money of the kind of 1 decreases in number, he can use it, being able to change into the electronic money of other kinds.

[0056]Next, a 2nd embodiment of the prepaid type electronic money conversion system concerning this invention is described. Although the composition with as fundamental prepaid type electronic money conversion system of a 2nd embodiment as the prepaid type electronic money conversion system of a 1st embodiment is the same, the contents of user balance DB32 which the conversion server 20 has differ. It explains referring to drawing 9 in which balance DB32 classified by user contained in the conversion server 20 of a 2nd embodiment is shown about this point. The balance according to each electronic money does not have balance DB32 classified by user, but the balance is shown as integrated electronic money for balance management which unified each electronic money. Conversion with each electronic money and integrated electronic money is changed according to the conversion rate stored in conversion rate DB24 like the case of a 1st embodiment.

[0057]Thus, since the user U itself does not need to manage the balance for every electronic money by constituting balance DB32 classified by user with integrated electronic money, improvement in the convenience of the conversion server 20 can be aimed at. In this embodiment, although different electronic money for balance management from the electronic money which each issue terminals A-D publish as integrated electronic money was newly founded, it is not necessary to necessarily found integrated electronic money. That is, it is good also as transforming other electronic money into A electronic money by using A electronic money of a 1st embodiment as integrated electronic money, for example.

[0058]Next, a 3rd embodiment of the prepaid type electronic money conversion system of this invention is described. Although the composition with as fundamental prepaid type electronic money conversion system of a 3rd embodiment as the prepaid type electronic money conversion system 10 of a 1st embodiment is the same, the contents of allowance DB41 which the conversion server 20 has differ. Drawing 10 is a figure showing allowance DB41 contained in the conversion server 20 of a 3rd embodiment. Allowance DB41 of a 3rd embodiment is constituted by the set of the electronic money of plurality [electronic money / of the kind of 1]. That is, the electronic money of the kind of 1 is managed by two or more ID. For example, 1500pt is managed by ID of 5400pt and KKK by ID of JJJ at ID of 260pt and LLL, and A electronic money serves as 101215pt in total. Thus, by having allowance DB41 of composition of that the electronic money of the kind of 1 is manageable by two or more ID, prepaid type electronic money conversion system can be employed as follows.

[0059]Drawing 11 is a flow chart which shows employment of prepaid type electronic money conversion system. Below, the user JJJ who is one of the users U is taken up for an example, and it explains concretely. First, the user JJJ requests issue of electronic money from the issue terminal A (S60). the issue terminal A -- a request -- taking charge (S62) -- publishing A electronic money to the user JJJ (S64) the user JJJ acquires A electronic money (S66).

[0060]And the user JJJ requests membership registration from the conversion server 20 (S68), and the conversion server 20 registers the user JJJ into balance DB42 classified by user (S70). Since the user JJJ

can use the electronic money of two or more kinds with the conversion server 20 if it registers with the conversion server 20, the necessity of continuing and owning A electronic money acquired individually does not almost have him. In such a case, since allowance DB41 can manage the electronic money of the kind of 1 by two or more ID in this embodiment, the electronic money which the user JJJ owns can be taken over. That is, if the electronic money which the user JJJ owns is transferred to the conversion server 20, in the conversion server 20, the balance of the electronic money taken over to allowance DB41 can be stored (refer to drawing 10), and it can add to the balance DB according to user of the user JJJ who transferred this electronic money (refer to drawing 12). Thereby, the user JJJ can store in user balance DB42 the electronic money individually owned in response to issue, and can change the kind of electronic money. By drawing 10, since it is easy, ID of the electronic money which the user JJJ owned has been indicated as JJJ.

[0061]With such a prepaid type electronic money system, this system can be joined the user U who has electronic money individually from before subscription utilizing this electronic money for this system effectively, and convenience will improve.

[0062]As mentioned above, although the embodiment of this invention has been described in detail, this invention is not limited to the above-mentioned embodiment.

[0063]In a 1st embodiment of the above, although the conversion rate deciding part 25 supposes that a conversion rate will be determined based on the frequency in use of each electronic money, it is good also as the user U determining a conversion rate based on the frequency which uses electronic money. That is, it is good also as computing a conversion rate by assigning lower than usual pt unit price of the electronic money of a converting destination to the user U with a high capacity factor of electronic money as a privilege.

[0064]To necessarily not have to change a conversion rate and use a fixed conversion rate, the conversion rate deciding part 25 is unnecessary.

[Translation done.]

* NOTICES *

1.This document has been translated by computer. So the translation may not reflect the original precisely.

2.**** shows the word which can not be translated.

3.In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1]It is a lineblock diagram showing the prepaid type electronic money conversion system of a 1st embodiment.

[Drawing 2]It is a figure showing the example of the allowance DB of a 1st embodiment.

[Drawing 3]It is a figure showing the example of the balance DB according to user of a 1st embodiment.

[Drawing 4]It is a figure showing the example of the point unit price of each electronic money.

[Drawing 5]It is a figure showing the example of the conversion rate DB of a 1st embodiment.

[Drawing 6]It is a flow chart which shows the flow of settlement of the prepaid type electronic money conversion system of a 1st embodiment.

[Drawing 7]It is a figure showing the example of the balance DB according to user after changing the kind of electronic money.

[Drawing 8]It is an explanatory view explaining the method of the determination of a conversion rate.

[Drawing 9]It is a figure showing **** of the balance DB according to user of a 2nd embodiment.

[Drawing 10]It is a figure showing the example of the allowance DB of a 3rd embodiment.

[Drawing 11]It is a flow chart which shows employment of the prepaid type electronic money conversion system of a 3rd embodiment.

[Drawing 12]It is a figure showing the balance DB according to user of a 3rd embodiment.

[Description of Notations]

10 ... Prepaid type electronic money conversion system, 12 ... User, 14 ... The Internet, 20 ... Prepaid type electronic money conversion system, 21 [... A conversion rate database, 25 / ... A conversion rate deciding part, A-D / ... An issue terminal, a-d / ... Store terminal.] ... An allowance database, 22 ... The balance database according to user, 23 ... A money converter, 24

[Translation done.]

DRAWINGS

[Drawing 4]

電子マネー名称	ポイント単価
A電子マネー	¥100
B電子マネー	¥200
C電子マネー	¥ 50
D電子マネー	¥150

[Drawing 5]

24

	A電子マネー	B電子マネー	C電子マネー	D電子マネー
A電子マネー	1.00	0.50	2.00	0.66
B電子マネー	2.00	1.00	4.00	1.33
C電子マネー	0.50	0.25	1.00	3.00
D電子マネー	1.50	0.75	0.33	1.00

[Drawing 1]
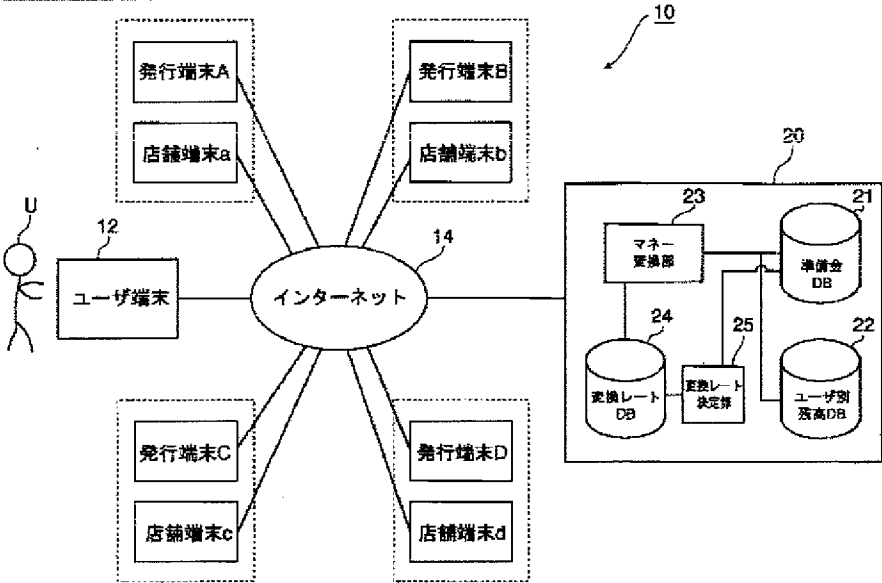
[Drawing 2]

21

電子マネー名称	ポイント単価	使用頻度	補充可能性
A電子マネー	100000pt	大	○
B電子マネー	33442323pt	中	△
C電子マネー	3203pt	大	◎
D電子マネー	32309832pt	小	×

[Drawing 8]

基本レート	電子マネー名称	購入ポイント1	購入ポイント2	推移率	ポイント変動	変換レート
100	A電子マネー	2000	2800	0.4	0.21	102
110	B電子マネー	2120	3000	0.41	0.23	112
210	C電子マネー	3000	2350	-0.21	-0.4	206
130	D電子マネー	1323	1980	0.49	0.3	133
	合計ポイント	8443	10130	0.19		

[Drawing 3]

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会員番号	ID	PASSWORD	円換算総額	A電子マネー	B電子マネー	C電子マネー	D電子マネー
1	FFF	*****	¥80,000	100	300	50	50
2	GGG	*****	¥15,000	0	0	150	50
3	HHH	*****	¥116,900	345	12	100	200
4	I I I	*****	¥500	0	0	10	0
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

[Drawing 7]

22

会員番号	ID	PASSWORD	円換算総額	A電子マネー	B電子マネー	C電子マネー	D電子マネー
1	FFF	*****	¥80,000	60	320	50	50
2	GGG	*****	¥15,000	0	0	150	50
3	HHH	*****	¥116,900	345	12	100	200
4	I I I	*****	¥500	0	0	10	0
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

[Drawing 6]

ユーザ 〜U	変換サーバ 〜20	店舗端末	発行端末
START	START	START	START

S10 電子マネー発行依頼 → 依頼受託 S12

S16 電子マネーを準備金DBに格納 ← 電子マネー発行 S14

S18 会員登録 → S20 ユーザ別残高DBに会員登録

S22 商品閲覧 → S24 商品公開

S28 定価確認 ← S26 定価表示

S30 電子マネー変換要求 → S32 電子マネーの種類変換

S34 代金支払い要求 → S36 要求受信

S38 代金支払い → S40 代金受領

S46 商品受取り ← S44 商品ダウンロード又は発送

S42 ユーザ別残高DBから支払い分引落

S48 電子マネー換金依頼 → 依頼受託 S50

S54 現金受取り ← 電子マネー換金 S52

| END | END | END | END |
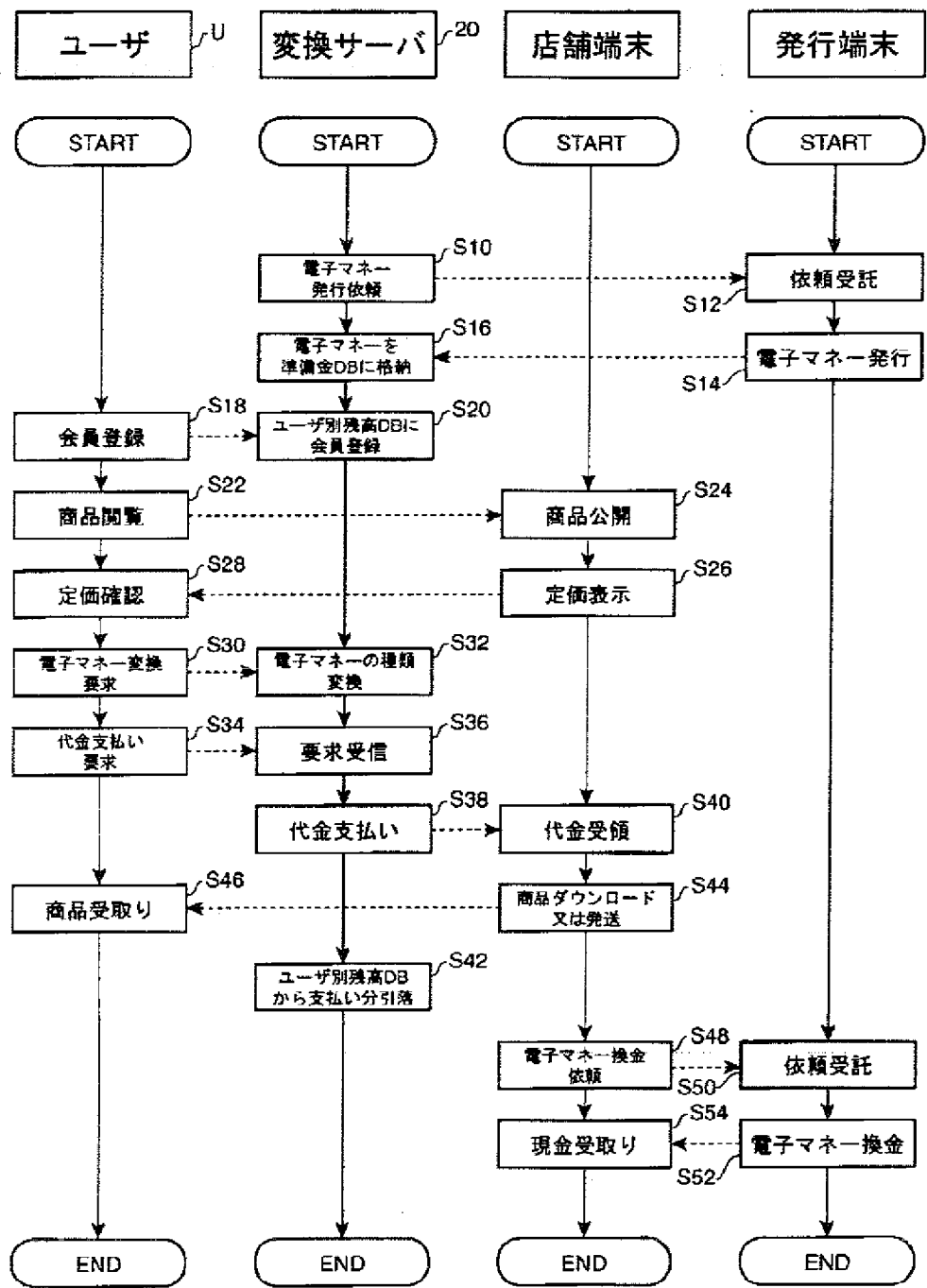
[Drawing 9]

32

会員番号	ID	PASSWORD	円換算根額	総合電子マネー
1	FFF	*****	¥80,000	800
2	GGG	*****	¥15,000	150
3	HHH	*****	¥116,900	1169
4	III	*****	¥500	5
:	:	:	:	:

[Drawing 11]

ユーザ	U	変換サーバ	20	発行端末

```
   START              START              START
     |                  |                  |
     v                  |                  v
┌──────────┐S60         |            ┌──────────┐S62
│ 電子マネー  │··········|···········>│ 依頼受託   │
│ 発行依頼   │          |            └──────────┘
└──────────┘          |                  |
     |                  |                  v
┌──────────┐S66         |            ┌──────────┐S64
│電子マネー取得│<·········|············│電子マネー発行│
└──────────┘          |            └──────────┘
     |                  |                  |
     v                  v                  |
┌──────────┐S68   ┌──────────┐S70         |
│ 会員登録   │·····>│ユーザ別残高DBに│        |
└──────────┘      │ 会員登録    │          |
     |            └──────────┘          |
     v                  |                  |
┌──────────┐S72   ┌──────────┐S74         |
│所有電子マネー│·····>│準備金DBに格納 │        |
│  譲渡     │      │ユーザ別残高DBに格納│     |
└──────────┘      └──────────┘          |
     |                  |                  |
     v                  v                  v
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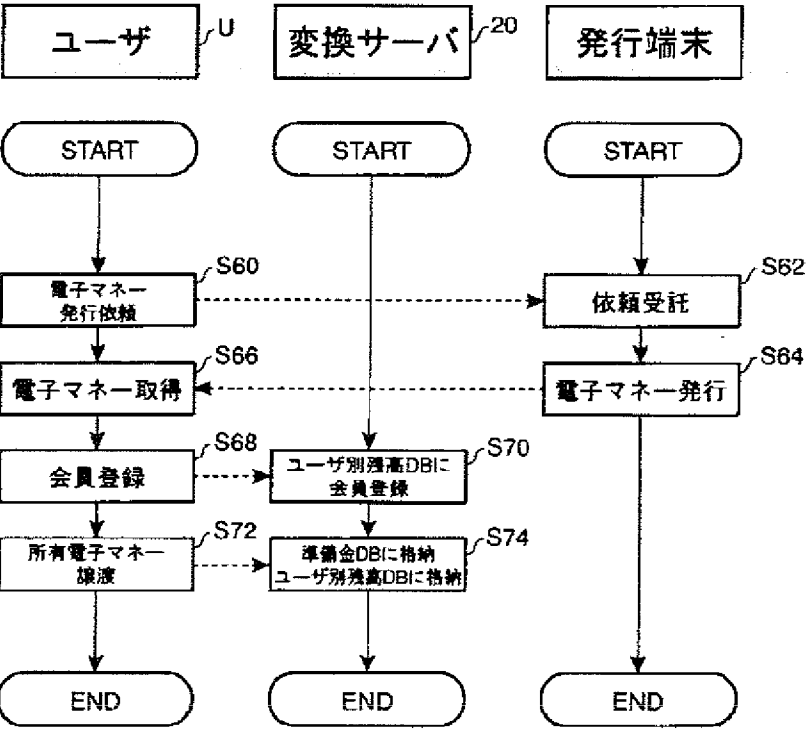
[Drawing 12]

42

会員番号	ID	PASSWORD	円換算総額	A電子マネー	B電子マネー	C電子マネー	D電子マネー
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮
638	JJJ	*****	¥540,000	5400	0	0	0
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

[Drawing 10]

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電子マネー名称	総ポイント数	ID	PASSWORD	ポイント数
A電子マネー	101,215pt	JJJ	jjj	5400pt
		KKK	kkk	260pt
		LLL	lll	1500pt
		⋮	⋮	⋮
B電子マネー	363184pt	MMM	mmm	5600pt
		NNN	nnn	750pt
		OOO	ooo	1525pt
		⋮	⋮	⋮
C電子マネー	5015pt	PPP	ppp	100pt
		QQQ	qqq	50pt
		RRR	rrr	210pt
		⋮	⋮	⋮
D電子マネー	6517340pt	SSS	sss	6010pt
		TTT	ttt	560pt
		UUU	uuu	3003pt
		⋮	⋮	⋮

[Translation done.]